PDS Imaging Node Atlas III and Faceted Navigation. A. Stanboli[1] and S. LaVoie[2], [1]Jet Propulsion Laboratory, California Institute of Technology (4800 Oak Grove Drive, Pasadena, CA 91109), [2]Jet Propulsion Laboratory, California Institute of Technology (4800 Oak Grove Drive, Pasadena, CA 91109).

Faceted navigation is a form of product search that has been utilized in the retail industry since the early 2000s.[1] Online shopping interfaces such as amazon.com and Google Shopping are leading examples of the use of faceted navigation. By allowing faceted navigation the user is able to apply or remove facet constraints in any order.[2] A facet is a distinct feature or aspect of a set of objects and a way in which a resource can be classified.[3] The PDS Imaging Node Atlas III utilizes faceted navigation, an interactive style of browsing datasets that allows users to filter a set of items by progressively selecting from only valid values of a faceted classification system. In the Atlas III facets are defined by the most commonly used search criteria for imaging datasets including but not limited to: mission name, instrument name, target, product type, lighting geometry meta-data (emission angle, incidence angle, phase angle), lat/lon meta-data, time constraints, etc. As the user applies a constraint the user will get immediate feedback with counts next to each facet listed. For example, when the user applies the constraint of mission name equals Cassini, the list of targets will be updated with counts next to each target listed. This takes away from the need for prior knowledge, a common complaint of previous users of search interfaces. Without the immediate feedback displaying how the data is distributed among facets, older systems required a user to guess what constraint they should apply next to narrow down the results. The user interface of the Atlas III has also been redesigned to follow the traditional layout of a faceted navigation interface. Traditionally faceted navigation interfaces display filters on the left of the screen and a grid of images to the right. In addition to the faceted approach, the Atlas III builds on the features of the previous Atlas including a map interface for the Saturnian moons, Earth's moon and Mars. The Atlas III also incorporates the use of the MGSS webification backend that makes use of the image transformation software developed by MGSS (MIPL) through javascript widgets.

References: [1] Holst, C. (2014, August 18). The Current State Of E-Commerce Search - Smashing Magazine. Retrieved March 25, 2015, from http://www.smashingmagazine.com/2014/08/18/the-current-state-of-e-commerce-search/.
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